

# MACROCALLISTA NIMBOSA AT ALLIGATOR HARBOR<sup>1</sup>

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*Macrocallista nimbosa* Solander is a large and colorful marine pelecypod of the family *Veneridae*. It is confined to the western North Atlantic where its range is from North Carolina to Florida and the Gulf of Mexico. There is only one other species of this genus known for the same area, *M. maculata* Linnaeus, having a similar but somewhat more extensive range (Dall 1902, Clench 1942).

*M. nimbosa* occurs in shallow water of stable salinity where it burrows in sandy bottom. Adult shells are mostly 4-5 inches long and, because of the colorful radiating pattern of the shell, are commonly called "sunray venus" (Abbott 1954, p. 416, plate 39, fig. b). This clam is edible and of excellent flavor, however, it has never been an item of commerce because, as Clench (1942) states, "Though not rare within its range, it does not appear to be excessively common at any locality".

Since the establishment of the Alligator Harbor Laboratory of the Oceanographic Institute, Florida State University (in 1950), the Alligator Harbor area has become relatively well-known with respect to the abundance and distribution of most of the common marine invertebrates (Menzel 1956). *Macrocallista nimbosa* has usually been taken in living condition whenever collecting by digging was done in suitable habitats, so that it was regarded as a common species but not an abundant one.

During the summer of 1959, however, collecting of marine invertebrates on the sand and sea grass flats off the end of Alligator Point in connection with a course in marine biology indicated an unusually dense population of *M. nimbosa*. Accordingly, a limited amount of quantitative sampling was done between July 15 and 22, 1959, and the results are reported herein.

Thirteen one-meter quadrats were sampled on the flats off Alligator Point, some chosen at random, some selected. A total of 84 live clams were taken from these quadrats by digging to a depth of 1.5 to 2 feet. The most productive quadrat yielded 16

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clams, two yielded 15 each, and two yielded 9 each. An average of 6.46 clams were taken per quadrat.

While occasional live specimens were found on the surface, the vast majority were beneath, most of them at a depth of 6 to 8 inches, but it is estimated that at least one-third were 12 inches deep or more. A few were found as deep as two feet and it is thus possible that some were deeper and missed.

While a few clams were found beneath the stands of sea grasses (*Diplanthera wrightii* (Ascherson) Ascherson and *Thalassia testudinum* König), the average number under grass was less than one per square meter. The large populations were found in sandy depressions surrounded by sea grass but free of it. The sea side and the land side of the grass flats were not sampled.

A sample of 30 specimens was measured for length, height, and width. The results are summarized in the following table:

	length	height	width
smallest	73	40	21 mm
mean	94.5	49.5	26.5
largest	116	59	31
average	95.6	51.8	26.2

The dimensions given above, when compared with averages given in the references cited, suggest that this population was composed of medium-sized rather than mature individuals.

The abundance of this clam in the area sampled was more than adequate to support a commercial fishery, provided such population density were prevalent over a sufficiently extensive area. There are many square miles of habitat that would appear to be as suitable for *M. nimbosa* as the area sampled.

Continued annual sampling of this population is needed to determine whether it represents an unusual peak or whether it is more or less stable, and whether it extends into neighboring areas in such density.

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